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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/721,677 11/27/00 NORSKOV

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EXAMINER

VUL. Q

ART UNIT

PAPER NUMBER

2841

DATE MAILED:

09/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/721,677

Applicant(s)

NORSKOV, SOREN

Examiner

Quynh-Nhu H. Vu

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other.

DETAILED ACTION

Information Disclosure Statement

1. Applicant does not send the translation of document number EP 0630176 as the applicant discloses in the information disclosure statement.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 is confusing since a second capacitor plate comprises a layer of conductive glue. According to claim 1, the second capacitor plate being electrical connected with via, which is meaning the capacitor plate denotes element 5 instead of the conductive glue 3.

For the examining purpose, examiner interprets claim 6 as follow: the first capacitor plate comprises a layer of conductive glue.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1-4, 7, 9-10, 17 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Dohya [US 4,736,521].

As to claims 1-2 and 9, Dohya discloses in Fig. 1 a ground plane for a semiconductor chip adapted to be mounted on a supporting member (11) in a chip package; wherein the ground plane comprises at least one first capacitor plate (an insulating layer 17 provided in between the two layers 18) provided within the chip package; and at least one second capacitor plate (the insulating 17 provided in between the layer 18 and 16) provided on the supporting member; the first and second capacitor plate being separated by a dielectric layer (17) and capacitively coupled to each other via this layer, and the ground plane comprising at least one first conducting member (13, 14 or 16), the first conducting member being at least one electrically conducting via (13) extending through the supporting member and electrically coupled in series with the second capacitor plate.

As to claims 3 and 17, the dielectric layer (17) is an integral part of the chip.

As to claim 4, the dielectric layer (17) covers the entire surface of the chip facing the supporting member.

As to claim 7, the capacitor plate is a metallic layer on the supporting member.

As to claims 10 and 20-21, the via and the metallic layer are integrally formed from the same metal.

6. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Cuvillier et al. [GB 2-118371].

As to claim 13, Cuvilliers et al. disclose in Fig. 1 a semiconductor chip package comprising a semiconductor chip (12) and a supporting member (14), the supporting member (14) comprising at least one metal (16, 31) covered area and at least one electrically conductive

via (21, 22) extending from the metal covered area through the supporting member, wherein the chip (12) is adhered to the supporting member (14) by means of conductive glue (27, 28a, 28b, 29a, 29b are solder) and the conductive glue is in electrical contact with the metal covered area.

As to claims 11 and 12, since the method of manufacturing the device is merely a list of steps of forming, these steps must be performed in order to obtain the device (see rejection of claim 13 above). Therefore, the method of manufacturing would be inherent to the shown structure of the device.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dohya.

Dohya discloses all claimed subject matter except for the dielectric layer comprises silicon oxide. However, silicon oxide is very well known in the art to using as dielectric layer, since silicon oxide has excellent barrier, insulating properties.

9. Claims 6, 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dohya in view of Dobers et al. [EP 630,176].

Dohya does not disclose the first capacitor plate comprises a layer of conductive glue.

Dobers et al. disclose in Fig. 1 a capacitor plate (2) comprises a layer of conductive glue.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the conductive glue for the purpose of adhering the two substrates together.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quynh-Nhu H. Vu whose telephone number is 703-305-0850. The examiner can normally be reached on 7:30-5:00 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

QNV
September 19, 2001

Albert W. Paladini 9/20/01
ALBERT W. PALADINI
PRIMARY EXAMINER